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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/681,676	10/08/2003	Daniel Peter Ivkovich JR.	125054/11901 (21635-0110)	7687

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EXAMINER	
MAZUMDAR, SONYA	
ART UNIT	**PAPER NUMBER**
1734	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	12/28/2006	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/681,676	IVKOVICH ET AL.	
	Examiner	Art Unit	
	Sonya Mazumdar	1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 November 2006*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-24* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-24* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 October 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4 through 9, 15, 23, and 24 are rejected under 35 U.S.C. 102(b) as being unpatentable by Ross (US 5,830,529).

With respect to claims 1, 4, 5, 6, 7, 15, 23, and 24, Ross discloses method of applying coating to a substrate. The method includes providing a base, i.e. deposition substrate, constructed from disposable material such as water transfer type paper, which would dissolve in water. The base is coated with such materials that are metallic, reflective, holographic, or retroreflective, i.e. an optical coating, and includes a release coating, i.e. release system, such as water slide coating that will dissolve in water (column 9, line 66 - column 10, line 3; column 5, lines 41-63; column 18, lines 47-67; column 19, line 30; column 28, lines 38-39). An adhesive, i.e. bonding element, is applied to one surface of the coating for attachment of the coating from a base to a final or intermediate surface by heat and pressure (column 43, lines 35-43). If the coating is applied to the intermediate surface, the intermediate surface is used to reverse the orientation of the coating during transportation or transposition onto the final surface and the intermediate surface includes a release coating with the final surface includes brass, plaques, glass, or brick (column 23, lines 19-23; column 38, lines 1-22).

With respect to claims 8 and 9, Ross teaches the intermediate surface includes transfer tape (column 38, lines 8-10). According to Applicant's specification, a release-and-transfer structure may be a polymeric releasable adhesive tape (paragraph 0013).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ross as applied to claim 1 above, and further in view of Duchane et al.

Ross fails to teach an organic deposition substrate. Duchane et al disclose a method of forming a thin metal foil on a polyvinyl alcohol film and the alcohol film and metal coating are immersed together in a water bath to dissolve the alcohol film (column 4, lines 37-51; column 5, 34-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a polyvinyl alcohol substrate as taught by Duchane et al. to allow easier dissolution of itself for removal against the optical coating and to provide a 3-dimensional optical coating of any desired shape against the article (column 2, lines 10-12).

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ross as applied to claim 1 above, and further in view of Shaul et al. (US 3,925,138)

The teachings of claim 1 are as described above.

Ross fails to teach applying an aluminum layer as a release system. Shaul et al. teach applying release-coated aluminum foil to a substrate to form a foil clad laminate and later treating the laminate with a solution to dissolve the aluminum foil layers (column 2, line 59; column 3, lines 32-34; column 7, lines 18-23).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply an aluminum foil as a release system as Shaul et al. taught because aluminum foil would not form a strong adhesive bond with most substrates and is preferred for economical purposes.

6. Claims 10 through 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross as applied to claim 1 above, and further in view of Conolly (US 4,623,087).

The teachings of claim 1 are described as above.

With respect to claim 10, Ross as disclosed above is silent as to the device substrate is a gas turbine engine. Conolly discloses a method of applying an optical coating by ways of a carrier to articles such as a turbine blade or combustion chamber for a gas turbine engine (column 2, lines 7- 10 and lines 36-39; column 3, lines 38-42)

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide an optical coating to a component of a gas turbine engine as disclosed by Conolly to provide a thermal barrier material to the engine components (column 2, lines 11-14).

With respect to claims 11 and 12, although Conolly does not expressly teach furnishing a new-make or repaired article's surface to receive an optical coating, where Applicant's specification defines a new-make article as one that has not previously been in service, Conolly teaches applying an optical coating to an article, which may be newly manufactured or repaired, to achieve a certain characteristic. And therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to apply an optical coating to an article as Conolly taught to the method disclosed by Ross.

7. Claims 13, 16-18, and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross as applied to claim 1 above, and further in view of Hankland (U.S. 4,407,685).

The teachings of claim 1 are as described above.

Ross does not specifically teach heating and pressing to affix the coating to the article using an autoclave. Hankland teaches a method of transferring an optical coating, which includes placing an composite of a carrier member with the optical coating and the article to be coated into an autoclave with an adhesive element as a component of the article, then heating and pressing to cure the adhesive (column 3, lines 16-22, lines 43-46, and lines 54-61; column 4, lines 25-33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide use an autoclave to affix a metal coating with heating and pressing as disclosed by Hankland to provide a method of coating surface such as curved surfaces in a one step process (column 1, lines 54-57).

8. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ross as applied to claim 1 above, and further in view of Alexander (U.S. 3,654,016).

Ross does not teach affixing the coating to the article with ironing. Alexander teaches a method of adhering foil to a surface, which includes providing a foil, i.e. optical coating, on a carrier member and ironing the foil onto the substrate with heat and pressure and removing the carrier member (column 2, lines 53-60).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply a coating on a carrier member to an article by ironing as taught by Alexander to provide method of applying foil to an article with greatly reduce waste (column 1, lines 54-56).

9. Claims 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ross as applied to claim 1 above, and further in view of Oliva (U.S. 4,153,494).

Ross does not teach bonding the adhesive to the article surface and thereafter bonding the optical coating to the adhesive. Oliva discloses a method of metallizing surfaces, which includes applying an adhesive or cement to either the surface of the article, or the surface of the metallic coating (column 2, lines 15-20, lines 24-28, and lines 42-51).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to applying the adhesive to the surface of the article as disclosed by Oliva as an alternative and equivalent method of bonding an optical coating to an article.

10. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ross in view of Duchane et al. and Hankland.

Ross discloses method of applying coating to a substrate. The method includes providing a base, i.e. deposition substrate, constructed from disposable material such as water transfer type paper, which would dissolve in water. The base is coated with such materials that are metallic, reflective, holographic, or retroreflective, i.e. an optical coating, and includes a release coating, i.e. release system, such as water slide coating that will dissolve in water (column 9, line 66 - column 10, line 3; column 5, lines 41-63; column 18, lines 47-67; column 19, line 30; column 28, lines 38-39). An adhesive, i.e. bonding element, is applied to one surface of the coating for attachment of the coating from a base to a final or intermediate surface by heat and pressure (column 43, lines 35-43). If the coating is applied to the intermediate surface, the intermediate surface is used to reverse the orientation of the coating during transportation or transposition onto the final surface and the intermediate surface includes a transfer tape (column 38,

lines 8-10). According to Applicant's specification, a release-and-transfer structure may be a polymeric releasable adhesive tape (paragraph 0013). The final surface includes brass, plaques, glass, or brick (column 23, lines 19-23; column 38, lines 1-22).

Ross fails to teach an organic deposition substrate. Duchane et al disclose a method of forming a thin metal foil on a polyvinyl alcohol film and the alcohol film and metal coating are immersed together in a water bath to dissolve the alcohol film (column 4, lines 37-51; column 5, 34-40).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a polyvinyl alcohol substrate as taught by Duchane et al. to allow easier dissolution of itself for removal against the optical coating and to provide a 3-dimensional optical coating of any desired shape against the article (column 2, lines 10-12).

Also, Ross does not specifically teach heating and pressing to affixing the coating to the article. Hankland teaches a method of transferring an optical coating, which includes placing an composite of a carrier member with the optical coating and the article to be coated into an autoclave with an adhesive element as a component of the article, then heating and pressing to cure the adhesive (column 3, lines 16-22, lines 43-46, and lines 54-61; column 4, lines 25-33).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide use an autoclave to affix a metal coating with heating and pressing as disclosed by Hankland to provide a method of coating surface such as curved surfaces in a one step process (column 1, lines 54-57).

Response to Arguments

11. In light of amended claims in copending application 10/702,801, which differ from claims published in US 2005/0100665, and applicant's arguments, see pages 7 through 12, filed November 15, 2006, with respect to the provisional nonstatutory obviousness-type double patenting rejection have been fully considered and are persuasive, and the rejection has been withdrawn.

12. Applicant's arguments, see pages 13 through 31 of remarks filed November 15, 2006, have been fully considered but they are not persuasive.

In general response to all of said arguments, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992).

13. With respect to the arguments against the rejection of Ground 2 (see pages 13-14), Ross teaches a base with a water-soluble release coating (i.e. first release system) and an optical coating provided thereon. An intermediate surface with a release coating (i.e. second release system) is attached to the base, on top of the optical coating, and the base is removed. As can be seen, two different release systems are taught in the process. Therefore Ross's teachings read on the limitations of claims 1 and 23 and the rejection of claims 1 and 23, and claims 4 through 9, 15 and 24 accordingly, are maintained.

14. With respect to the arguments against the rejection of Ground 3 (see pages 14-16), in this case, Duchane et al. teach use of a water-soluble polyvinyl alcohol substrate carrying a metal foil (i.e. optical coating). This teaching of a polyvinyl alcohol substrate

may be used with Ross's teaching of a water-soluble first release system; thus, the combination of teachings of Ross and Duchane et al. read upon the limitations of the claim, and claim 2 stands rejected.

15. With respect to the arguments against the rejection of Ground 4 (see pages 16-17), in this case, Shaul et al. teach use of release-coated aluminum foil, which can be specifically etched or dissolved away, in forming a laminate. Therefore, in combination with the teachings of Ross, the limitations of the claim are read upon, and claim 3 stands rejected.

16. With respect to the arguments against the rejection of Ground 5 (see pages 17-19), it is agreed that Ross does not teach such limitations set in claims 10 through 12. But in reference to a furnishing step of a specific article, Conolly teaches a step of furnishing a surface of an article, such as a component for a gas turbine engine, so it is ready to receive an optical coating. Therefore, in combination with the teachings of Ross, the limitations of the claims are read upon, and claims 10 through 12 stand rejected.

17. With respect to the arguments against the rejection of Ground 6 (see pages 19-23), Hankland teaches a method of transferring an optical coating from a carrier by means of an adhesive element (i.e. bonding element) as a component of an article and heating and pressing to effectuate transfer of the coating. This process takes place in an autoclave using a vacuum bag and a heat source. Also, because the metal coating, taught by Hankland, can be deposited by various methods (column 3, lines 43-53), it would have been obvious that the metal coating and a transfer substrate would be arranged in such a manner where each is affixed to the article surface. Therefore, in combination

with the teachings of Ross, the limitations of the claims are read upon, and claims 13, 16-18, and 20 stand rejected.

18. With respect to the arguments against the rejection of Ground 7 (see pages 23-24), it is agreed that Ross does not teach such limitations set in claim 19. But in reference to an affixing step, Alexander teaches ironing a foil onto a substrate, inherently with heat and pressure, and removing the foil's overlying carrier member to leave the foil on the substrate. Therefore, in combination with the teachings of Ross, the limitations of the claim are read upon, and claim 19 stands rejected.

19. With respect to the arguments against the rejection of Ground 8 (see pages 24-27), it is agreed that Ross does not teach such limitations set in claim 14. But in reference to an affixing step, Oliva teaches applying adhesive (i.e. bonding element) onto an article surface and adhering a metallic coating thereon. Therefore, in combination with the teachings of Ross, the limitations of the claim are read upon, and claim 14 stands rejected.

20. With respect to the arguments against the rejection of Ground 9 (see pages 27-31), the valid combination of Ross, Duchane et al., and Hankland were made in the above responses to arguments against the rejections of claims 1 and 13. Therefore, claims 21 and 22 stand rejected.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sonya Mazumdar whose telephone number is (571) 272-6019. The examiner can normally be reached on 8AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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